

U.S. Patent Application Serial No. 09/988,252
Amendment dated October 27, 2003
Reply to OA of April 25, 2003

REMARKS

Claims 1, 5-7, 11-13, 17-18 and new claims 19-21 are pending in this application. Claims 2-4, 8-10 and 14-16 have been canceled without prejudice or disclaimer. Claims 1, 5, 7, 11, 13 and 17 have been amended. No new matter has been added.

The support for the amendments and new claims is as follows: Claims 1, 7 and 13 (original claim 4 and p.25, lines 1-3 and lines 17-20); claims 5, 11, 17 (original claim 4); and new claims 19-21 (p.16-17 up to line 3).

Enclosed is a corrected drawing, labeling FIG. 2 as --PRIOR ART--.

Claims 7 and 13 have been rejected under 35 U.S.C. §102(b) as being clearly anticipated by **JP 2000-277887 (JP'887)**. The Office Action notes on p.2 that **JP'887** teaches applying a photosensitive conductive paste and teaches developing the film by exposure to a mercury lamp (Office Action p.3, text line 4).

Independent claims 7 and 13 have been amended to recite a thermosensitive layer (as opposed to a photosensitive layer as disclosed in **JP'887** (see all claims of **JP'887**)) and a heating step (step 3b which is irradiating in the IR range).

Claims 7 and 13 as now amended are not anticipated by **JP'887**.

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Claims 8-10, 15 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over **JP'887** [sic GB 2350727A]. Claims 8-10, 15 and 16 are cancelled with this amendment.

Claims 11, 12, 17 and 18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over **JP'887** in combination with JP 11-194,493 (**JP'493**); JP10-334,732 (**JP'732**) or JP 10-273,338 (**JP-338**). The Office Action notes (p.3, text lines 5 and 7) that all references teach a photosensitive paste.

In contrast the applicants are now claiming a thermosensitive paste. It would not follow logically that the combination of **JP'887** with **JP'493**; **JP'732** or **JP-338** would suggest the invention as now claimed, in other words, a thermosensitive paste. Therefore the claims would not be obvious to the skilled artisan by studying references related to photosensitivity.

Claim 1 has been rejected under 35 U.S.C. §103(a) as being unpatentable over **JP'887** in view of JP 06-260381 (**JP'381**). **JP'887** is described above. The abstract of **JP'381** (text lines 6-7) describes performing a mask-exposure to the positive resist by using a photo-mask. The references are directed toward photosensitive resins and light exposure methods.

The invention of claim 1 recites a thermosensitive paste and a heating step (3b) as opposed to light exposure. It would not follow logically that the combination of **JP'887** and **JP'381** would suggest the invention as now claimed, in other words, thermosensitive paste and a heating step.

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Therefore claim 1 would not be obvious to the skilled artisan by studying references related to light and not heat.

Sharp patterns can be formed according to claim 1 because patterns are created by forming a coating with the use of a positive thermosensitive paste composition containing a conductive powder and then irradiating the coating with an infrared laser beam, so that infrared heat reaches deep portions of the coating in spite of the presence of conductive powder in the coating.

In comparison, in the methods for forming patterns disclosed in the cited references, patterns are created by forming a coating using a positive or negative photosensitive conductive paste, and irradiating it with visible or UV light. It is difficult to form sharp patterns using visible or UV light because the light does not reach deep portions of the coating due to the presence of conductive powder therein.

As explained above, light exposure and heat exposure are not interchangeable here because of the existence of conductive power in the composition. Thus it would follow that amended independent claims 1, 7 and 13 would not be rendered obvious by references directed to light exposure methods.

Claims 2-4 has been rejected under 35 U.S.C. §103(a) as being unpatentable over **JP'887** in view of **JP'381**. Claims 2-4 have been cancelled.

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Claim 5-6 has been rejected under 35 U.S.C. §103(a) as being unpatentable over **JP'887** in view of **JP'381** further in combination with **JP'493; JP'732 or JP-338**. The Office Action notes (p.6, text line 4) that all references teach a photosensitive paste.

In contrast the applicants are now claiming a thermosensitive paste. It would not follow logically that the combination of **JP'887** with **JP'493; JP'732 or JP-338** would suggest the invention as now claimed, in other words, a thermosensitive paste. Therefore the claims would not be obvious to the skilled artisan by studying references related to photosensitivity.

The advantages of the claimed invention, described in the specification on page 42, line 1 to page 43, line 1, are nowhere even suggested by the references taken alone or in combination. This further supports the conclusion of non-obviousness.

Furthermore, new dependent claims 19-21 are nowhere disclosed or suggested by the references alone or in combination.

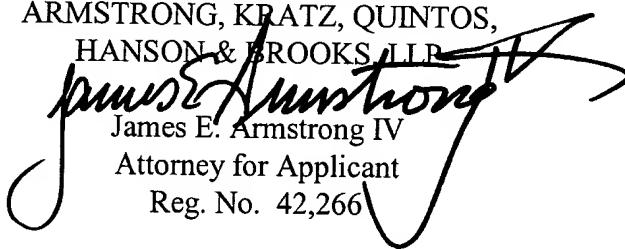
In view of the aforementioned amendments and accompanying remarks, the claims as amended and new claims 19-21, are believed to be in condition for allowance, which action, at an early date, is requested.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,
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